REMARKS

Claims 1-13 and 23 are currently pending in the subject application and are presently under consideration. Claims 1, 3-9, 11-13, and 23 have been amended, and claims 26-30 are new claims submitted herein for consideration, as shown on pages 4-9 of the Reply. Claims 14-22, 24, and 25 have been withdrawn, as stated *infra*. In addition, the specification has been amended as indicated on pages 2-3. No new matter has been added.

Applicants' representative hereby affirms the election with traverse of Species I (recited in claims 1-13 and 23) for further prosecution on the merits. Accordingly, claims 14-17, 18-22, 24, and 25 have been withdrawn. Applicants' representative reserves the right to rejoin these withdrawn claims at a later date, or pursue the non-elected claims in a division application.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Objection to Claim 5 due to informalities

Claim 5 stands objected to for minor informalities. Withdrawal of this objection is requested in view of the amendments to this claim.

II. Rejection of Claim 13 Under 35 U.S.C. § 112, First Paragraph

Claim 13 stands rejected under 35 U.S.C. § 112, First Paragraph, for failing to comply with the enablement requirement. This rejection should be withdrawn for at least the following reasons. Claim 13 has been amended herein, and the manner and process of making and using the subject matter recited in this amended claim is described in the disclosure, including the specification, in full, clear, concise, and exact terms so as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use it, in accordance with 35 U.S.C. § 112, First Paragraph.

35 U.S.C. § 112 provides, in part:

> [t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to

> enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

In particular, the subject claim recites: the query notification header enables at least one of an infrastructure component that can facilitate development of caching layers on top of SQL server applications or the creation of middle tier type caches that remain transparent to the client device.

The claimed subject matter, as stated above, is described in the original disclosure, including the specification. For example, the specification states that the features of the query notification header allow "creation of middle tier type caches that are transparent to the client." (*See* p. 28, ln. 34 – p. 29, ln. 3). The specification further states, with regard to the features of the query notification header, that developers building the caching layers need not be the same as the developers who create the SQL application, and the "query notification feature can enable an infrastructure component that can provide for development of caching layers on top of SQL server applications." (*See* p. 29, lns. 3-7). As can be readily seen, the manner and process of making and using the subject matter recited in amended claim 13 is described in the specification in such full, clear, concise, and exact terms so as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use it.

In view of at least the foregoing, it is respectfully submitted that applicants' invention as recited in claim 13 satisfies the enablement requirement in accordance with 35 U.S.C. § 112, First Paragraph. Withdrawal of this rejection is respectfully requested.

III. Rejection of Claims 1-4, 11, 12, 15, 16, and 23 Under 35 U.S.C. § 101

Claims 1-4, 11, 12, 15, 16, and 23 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. It should be noted that the Examiner did not initially state that claim 23 was being rejected under Section 101; however, the Examiner did later argue that claim 23 was being rejected under Section 101. (*See* Office Action dated July 28, 2006, p. 5, ¶ 4). Applicants' representative is responding herein under the assumption that the Examiner is rejecting claim 23 under Section 101. It is requested that

this rejection be withdrawn for at least the following reasons. The subject claims produce a useful, concrete, and tangible result and are therefore within the bounds of statutory subject matter, in accordance with 35 U.S.C. § 101. Further, claims 15 and 16 have been withdrawn from consideration and the rejection of these claims is therefore moot.

> Title 35, section 101, explains that an invention includes "any new and useful process, machine, manufacture or composition of matter."... Without question, software code alone qualifies as an invention eligible for patenting under these categories. *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338-39 (Fed. Cir. 2005) (holding that 35 U.S.C. § 101 did not limit inventions or components of an invention to structural or physical components (*e.g.*, non-software components). Rather, every component, including software components, of every form of invention deserves the protection of § 271(f) because it is patentable subject matter under 35 U.S.C. § 101).

Applicants' invention as recited in claims 1-4, 11, 12, and 23 produces a useful, concrete, and tangible result. For example, claim 1, as amended, recites: ***a computer-implemented system to facilitate communication between a client device and a server device*** comprising: ***a tabular data stream (TDS) protocol that comprises: a multiple active result set (MARS) header, and a data field*** that is part of the MARS header and ***identifies a number of pending requests known by the client device to the server device, the MARS header is employed to synchronize execution of queries*** for communication between the client device and the server device, based at least in part on the number of pending requests known by the client device, regardless of buffer size for the client device and the server device.

The claimed subject matter is a system implemented by a computer that includes a client device and a server device, and facilitates communication between these devices. The system facilitates such communication in part by including a data field that identifies, to the server device, the number of pending requests known by the client device, which facilitates synchronizing execution of queries for communication between the devices. Thus, the claimed subject matter produces a useful, concrete, and tangible result.

In view of at least the foregoing, the subject claims are properly limited to statutory subject matter in accordance with 35 U.S.C. § 101. Therefore, it is believed that claims 1-4, 11, 12, and 23 are in condition for allowance, and withdrawal of this rejection is respectfully requested. Further, claims 15 and 16 have been withdrawn from consideration, as stated herein, and the rejection as to claims 15 and 16 is moot and should be withdrawn.

IV. Rejection of Claims 11-13 Under 35 U.S.C. § 102(b)

Claims 11-13 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over Anand, *et al.* (US 5,974,416).

> For a prior art reference to anticipate, 35 U.S.C. § 102 requires that "***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added).

Applicants' claimed invention relates to an enhancement of a Tabular Data Stream (TDS) protocol that can be employed for client/server communication networks. The claimed subject matter can employ a Multiple Active Result Sets (MARS) feature, which can include a data field header, for example. Such data field can identify, to a server, the number of pending requests known by a client, and thereby facilitate query synchronization, regardless of buffer sizes employed in the client-server communications network. The client's reporting of the number of pending requests to the server can facilitate synchronizing execution of queries, for example, where the server already has completed processing of previous requests. This can typically mitigate inconsistent server behavior related to instances where buffer zones are waiting to be read by the client.

In addition, the claimed subject matter can include a query notification header as part of the enhanced TDS protocol. At the time of establishing the query, the server can be asked to provide the client with future update results related to the query. As such, a requirement for periodically re-asking the server of any changes to the initial query can

be mitigated. Accordingly, the manner of sending such notifications (*e.g.* channels for sending the notification), as well as the set up for notification is established at the time of the query, and does not require changes to be made on the client side. Moreover, the query notification feature allows creation of middle tier type caches, which can be transparent to the client.

In particular, independent claim 11, as amended, recites: ***the TDS protocol comprising a query notification header with a data field that requests updates related to a query at a time the communication is initially established***. Anand, *et al.*, does not disclose this distinctive feature of the claimed subject matter.

Rather, Anand, *et al.* discloses a tabular data stream format, specifically, the Advanced Data TableGram (ADTG) format, for the transmission of tabular data between a client and a server. (*See* Abstract). Anand, *et al.* uses the ADTG format to marshal data for transfer between a client and server. (*See* col. 2, lns. 12-16). The marshaled resultsets of database queries, *i.e.*, table rows containing updates made to them by applications, and status information for each row that contained the changes, are converted into an ADTG message. (*See* col. 2, lns. 16-21). In addition to receiving query results from the server, the client updates the database using an ADTG message containing both the updated data and the original data. (*See* col. 3, lns. 5-8). Anand, *et al.* further discloses utilizing tokens, including a token, whose purpose is to establish global parameters for the ADTG message, that may include a field for tracking updates to the format of ADTG messages. (*See* col. 8, lns. 12-22).

However, unlike the claimed subject matter, Anand, *et al.* is silent regarding a data field that ***requests*** updates related to a query ***at a time the communication is initially established***. Instead, Anand, *et al.* simply discloses ***tracking*** updates. ***Requesting*** updates related to a query is clearly different from ***tracking*** updates. Further, Anand, *et al.* fails to disclose that the requests for updates are made at the time the communication is initially established.

In contrast, the claimed subject matter includes a query notification header with a data field that requests updates related to a query at the time the communication is initially established.

In view of at least the foregoing, Anand, *et al.* does not disclose each and every element recited in independent claim 11 (and associated dependent claims 12 and 13). Accordingly, it is believed that the subject claims are in condition for allowance, and the rejection should be withdrawn.

V. Rejection of Claims 1-2, 4-9 and 23 Under 35 U.S.C. § 103(a)

Claims 1-2, 4-9 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anand, *et al.* (US 5,974,416), in view of Jordan, II, *et al.* (US 5,412,805). This rejection should be withdrawn for at least the following reason. Anand, *et al.* and Jordan, II, *et al.*, alone or in combination, do not disclose, teach, or suggest each and every element of the subject claims.

> To reject claims in an application under § 103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP § 706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

As stated, *supra*, the claimed subject matter relates to an enhancement of a TDS protocol that can be employed for client/server communication networks. In particular, independent claim 1 (and similarly claim 23) recites: a tabular data stream (TDS) protocol that comprises: ***a multiple active result set (MARS) header, and a data field that is part of the MARS header and identifies a number of pending requests known by the client device to the server device***. Anand, *et al.* and Jordan, II, *et al.*, alone or in combination, do not disclose, teach, or suggest this distinctive feature of the claimed subject matter.

Rather, Anand, *et al.* merely discloses that when a client process requests data from a database, the script or application issues a query to the server. (*See* col. 5, lns. 15-20). Thus, Anand, *et al.* is only concerned with ***the current query*** issued by the script or application, and ***not the number of requests*** pending at a given time, as in the claimed subject matter. Further, Anand, *et al.* fails to disclose ***a data field*** that identifies, to the server, ***the number of pending requests*** known by the client.

In contrast, the claimed subject matter can include a data field that identifies, to the server device, the number of pending requests known by the client device. The number of requests reported by the client can help synchronize the requests currently pending between client and server. (*See* p. 3, lns. 27-30). This can mitigate inconsistent server behavior related to instances where buffer zones are waiting to be read by the client. (*See* p. 3, lns. 30-31).

Additionally, amended claim 1 (and similarly claims 23) recites: ***the MARS header is employed to synchronize execution of queries for communication between the client device and the server device, based at least in part on the number of pending requests known by the client device, regardless of buffer size for the client device and the server device***. Anand, *et al.* is silent regarding these distinctive features of the claimed subject matter.

Rather, Anand, *et al.* discloses ***marshaling*** a query, as opposed to ***synchronizing execution of queries***, as in the claimed subject matter. Anand, *et al.* expressly defines marshaling as "the process of packaging up the data so that when it is sent from one process to another, the receiving process can decipher the data." (Anand, *et al.*, col. 2, lns. 10-12). Thus, Anand, *et al.* is only concerned with the process of packaging up data so that it can be deciphered when received. However, Anand, *et al.* does not address synchronizing execution of queries, which relates to the timing of when a query is to be executed. Further, Anand, *et al.* is silent regarding synchronizing execution of queries, ***based on the number of pending requests known by the client device***.

In contrast, with regard to the claimed subject matter, ***synchronizing*** execution of queries relates to ***the timing of when*** the queries are to be executed. (*See* p. 7, lns. 15-18; p. 22, lns. 25-30). As can be readily seen, the process of packaging data so it can be deciphered at the receiving end is different from the process of timing (*e.g.*,

synchronizing) when such data should be sent. Further, synchronization of the execution of queries is based at least in part on the number of pending requests known by the client device.

Based on the foregoing alone, the rejection of the subject claims should be withdrawn.

Moreover, the Examiner concedes that Anand, *et al.* fails to disclose: ***regardless of buffer size for the client and the server***, as claimed. (*See* Office Action dated July 28, 2006, p. 8, ¶ 6).

Instead, the Examiner contends that Jordan, II, *et al.* discloses "buffer size for the client and the server." (*See* Office Action dated July 28, 2006, p. 8, ¶ 6 (citing Jordan, II, *et al.*, col. 5, lns. 8-17)). However, in the subject application, what is claimed is a MARS header employed to synchronize execution of queries, "***regardless of buffer size*** for the client and the server." (*See* Application, claim 1). Jordan, II, *et al.* fails to disclose this distinctive feature of the claimed subject matter.

Jordan, II, *et al.* relates to a process in the memory of a processor that purports to enhance memory allocation and memory copying during the process of reconstructing a data structure. (*See* col. 1, lns. 29-32). Jordan, II, *et al.* only discloses that the server can calculate the total memory space needed for data structures based on the size of a communication buffer. (*See* col. 5, lns. 8-17). The mere mentioning of a size of a communication buffer does not disclose, teach or suggest "***regardless*** of buffer size for the client device or the server device," as in the claimed subject matter. Quite to the contrary, Jordan, II, *et al.* ***is very much concerned with the size*** of the communication buffer, as the memory needed and the size of the buffer are both examined to determine whether the size of the buffer is sufficient to meet the memory needs. (*See* col. 5, lns. 8-17; col. 6, lns. 21-38; and Fig. 4).

Conversely, the claimed subject matter ***is not concerned with the buffer size***, as it relates to synchronizing execution of queries, ***regardless of buffer size*** for the client device and the server device.

Furthermore, Jordan, II, *et al.* fails to cure the other aforementioned deficiencies of Anand, *et al.* with regard to the independent claims 1 and 23. Specifically, Jordan, II, *et al.* is silent regarding ***a MARS header***, and ***a data field*** that is part of the MARS

header and ***identifies a number of pending requests*** known by the client device to the server device, where ***the MARS header is employed to synchronize execution of queries*** for communication between the client device and the server device, ***based at least in part on the number of pending requests known by the client device***.

In view of at least the foregoing, Anand, *et al.* and Jordan, II, *et al.*, alone or in combination, do not disclose, teach, or suggest each and every element recited in independent claims 1 and 23 (and associated dependent claims 2 and 4-9). Accordingly, it is believed that the subject claims are in condition for allowance, and the rejection should be withdrawn.

VI. Rejection of Claims 3 and 10 Under 35 U.S.C. § 103(a)

Claims 3 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anand, *et al.* (US 5,974,416) in view of Jordan, II, *et al.* (US 5,412,805) and further in view of Clegg, *et al.* (US 6,356,946). This rejection should be withdrawn for at least the following reason. Anand, *et al.*, Jordan, II, *et al.*, and Clegg, *et al.*, alone or in combination, do not disclose, teach, or suggest all the limitations of the subject claims. Claims 3 and 10 depend from independent claim 1. Clegg, *et al.* fails to cure the aforementioned deficiencies of Anand, *et al.* and Jordan, II, *et al.* with respect to independent claim 1. Accordingly, it is believed that claims 3 and 10 are in condition for allowance, and the rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063[MSFTP619US]

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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